By way of summary, the present invention is directed to methods of treating antibody-mediated automimmune disorders. These disorders are characterized by a failure of the immune system to distinguish self from non-self. Individuals suffering from these disorders produce antibodies, i.e., autoantibodies, which over time, ultimately cause tissue damage. See specification at page 1, lines 5-18. The invention provides methods of treating the immune cells of an affected individual such that the production of autoantibodies is suppressed.

This invention is not about treating any immune disorder, as suggested by the Examiner. To the contrary, this invention is directed to treating immune disorders characterized by the production of autoantibodies. Although SLE is a well characterized example of this type of disorder, the methods of the invention are applicable to any immune disorder characterized by the production of autoantibodies. See Fundamental Immunology, fourth edition, W. E. Paul, ed., Lippincott-Raven Publishers, 1999, Chapter 33 (a copy of which is attached as Exhibit A). As pointed out in Chapter 33, autoimmune disorders have characteristic features, among which is the production of autoantibodies. Accordingly, Applicants should be able to broadly claim autoimmune disorders in which suppression of autoantibodies would reduce or ameliorate symptoms of the disease..

As the Examiner is aware, the standard for enablement is that the specification, taken in conjunction with the state of the art at the time the invention was filed, must enable one of skill in the art to make and use the invention. "An inventor need not, however, explain every detail since he is speaking to those skilled in the art." DeGeorge v. Bernier, 768 F.2d 1318, 1323 (Fed. Cir. 1985); see also M.P.E.P. § 2106V(B)(2).

Applicants submit that one of skill in the art would be able to apply the methods of the present invention to patients diagnosed with an autoimmune disorder characterized by the production of autoantibodies. The methods of removing PBMCs, treating the PBMCs *ex vivo*, reintroducing PBMCs and monitoring patients for suppression of immunoglobulin levels are well known to those of skill in the art. See specification at page 7, line 20

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through page 13, line 4. Further, it is well known that the medical management of human disease is empirical and not always satisfactory. See Paul, *supra* at page 1083. Applicants submit the specification provides adequate guidance in the terms of effective concentrations and incubation times such that a person of skill in the art would be able to apply the methods to treat autoimmune diseases other that SLE without undue experimentation. Accordingly, Applicants request that the rejection be withdrawn.

Rejection Under 35 U.S.C. § 112, second paragraph:

Claim 2 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner asserts that claim 2 is indefinite because the abbreviation "Ig" is not defined in the specification or the claims.

As admitted by the Examiner, the term "Ig" is commonly known to be the abbreviation for "immunoglobulin". To clarify that "immunoglobulin" is the molecule being claimed, applicants have replaced "Ig" with "immunoglobulin".

As regards the use of the word "immunoglobulin, Applicants respectfully submit the use of the term immunoglobulin does not render the claim indefinite. As is commonly known to those of skill in the art, the term "immunoglobulin" is used to define antigen-specific membrane receptors and secreted products of B cells; that is immunoglobulin molecules. Immunoglobulin molecules are members of a large family of proteins designated as the immunoglobulin supergene family. Within this superfamily, several classes of antibodies have been characterized based on the H chain present in the Ig molecule. Thus, the term immunoglobulin is known to encompasses the following five classes: IgG, IgM, IgD, IgA and IgE. See Fundamental Immunology, fourth edition, W. E. Paul, ed., Lippincott-Raven Publishers, 1999, pages 7-8 (a copy of which is attached as Exhibit B).

In addition, Applicants wish to draw the Examiner's attention to the specification at page 7, lines 18-19 where immunoglobulin (i.e., Ig) is defined as including "all forms of

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Ig, including IgM, IgG, IgE, etc." Accordingly, the applicants submit that the term "immunoglobulin" is not indefinite and the rejection should be withdrawn.

Applicants submit the claims are now in condition for allowance and an early notification of such is respectfully solicited. If after review, the Examiner feels there are further unresolved issues, the Examiner is invited to call the undersigned at (415) 781-1989.

The Commissioner is authorized to charge any additional fees which may be required or credit any overpayment to Deposit Account No. 06-1300 (our Order No. A67279-1/RFT/RMS/RMK).

Dated: Nov 10, 2000

Respectfully submitted,

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APPENDIX OF PENDING CLAIMS

2. (Amended) A method for treating an autoimmune disorder in a patient comprising:

a) removing [peripherial]peripheral blood mononuclear cells (PBMC) from said patient;

b) treating said cells with an inhibitory composition for a time sufficient to suppress [Ig]immunoglobulin production; and

c) reintroducing said cells to said patient.

3. (Amended) A method according to claim [1 or] 2 wherein said inhibitory composition comprises IL-2.

4. (Amended) A method according to claim [1 or] 2 wherein said inhibitory composition comprises a mixture of IL-2 and TGF-β.

5. (Amended) A method according to claim [1 or] 2 wherein said inhibitory composition comprises a CD2 activator.

6. A method according to claim 2 wherein said autoimmune disorder is systemic lupus erythematosus (SLE).